

Claims

What is claimed is:

- 1 1. A method for media repair of a storage device, comprising:
 - 2 performing a read operation on the storage device;
 - 3 detecting a read error;
 - 4 locking a logical block address on the storage device;
 - 5 performing a reassign operation on the storage device;
 - 6 performing a write operation on the storage device; and
 - 7 unlocking the logical block address.

- 1 2. The method of claim 1, wherein the storage device is a non-redundant RAID
2 configuration.

- 1 3. The method of claim 1, wherein the read operation is a READ LONG operation.

- 1 4. The method of claim 1, wherein the write operation is a WRITE LONG operation.

- 1 5. The method of claim 4, wherein the WRITE LONG operation produces invalid ECC
2 data.

- 1 6. The method of claim 1, wherein the storage device is a SCSI device.

- 1 7. The method of claim 1, wherein the storage device is an IDE device.

1 8. The method of claim 1, wherein the storage device is an ATA device.

1 9. The method of claim 1, wherein the storage device is a non-RAID configuration.

1 10. A method for media repair of a storage device, comprising:

2 performing a read operation on the storage device;

3 detecting a signature; and

4 performing a write operation on the storage device.

1 11. The method of claim 10, wherein the storage device is a non-redundant RAID
2 configuration.

1 12. The method of claim 10, wherein the read operation is a READ LONG operation.

1 13. The method of claim 10, wherein the write operation is a WRITE LONG operation.

1 14. The method of claim 12, wherein the WRITE LONG operation produces invalid ECC
2 data.

1 15. The method of claim 10, wherein the storage device is a SCSI device.

1 16. The method of claim 10, wherein the storage device is an IDE device.

1 17. The method of claim 10, wherein the storage device is an ATA device.

1 18. The method of claim 10, wherein the storage device is a non-RAID configuration.

1 19. A method for media repair of a storage device, comprising:

2 performing a read operation on the storage device;

3 locking a logical block address on the storage device;

4 performing a write operation on the storage device; and

5 unlocking the logical block address.

1 20. The method of claim 19, wherein the storage device is a non-redundant RAID
2 configuration.

1 21. The method of claim 19, wherein the read operation is a READ LONG operation.

1 22. The method of claim 19, wherein the write operation is a WRITE LONG operation.

1 23. The method of claim 20, wherein the WRITE LONG operation produces invalid ECC
2 data.

1 24. The method of claim 19, wherein the storage device is a SCSI device.

1 25. The method of claim 19, wherein the storage device is an IDE device.

1 26. The method of claim 19, wherein the storage device is an ATA device.

1 27. The method of claim 19, wherein the storage device is a non-RAID configuration.

1 28. A computer system comprising:

2 a storage device having storage media, the storage device constructed and arranged to
3 perform a read operation;

4 the storage device further constructed and arranged to detect a read error;

5 the storage device further constructed and arranged to lock a logical block address on the
6 storage device;

7 the storage device further constructed and arranged to perform a reassign operation on the
8 storage device;

9 the storage device further constructed and arranged to perform a write operation on the
10 storage device; and

11 the storage device further constructed and arranged to unlock the logical block address;

12 wherein the storage device can detect errors in the storage media during the read
13 operation and write invalid ECC data to prompt replacement of the file being read.

1 29. The system of claim 28, wherein the storage device is a non-redundant RAID
2 configuration.

1 30. The system of claim 28, wherein the read operation is a READ LONG operation.

- 1 31. The system of claim 28, wherein the write operation is a WRITE LONG operation.
- 1 32. The system of claim 28, wherein the WRITE LONG operation produces invalid ECC
2 data.
- 1 33. The system of claim 28, wherein the storage device is a SCSI device.
- 1 34. The system of claim 28, wherein the storage device is an IDE device.
- 1 35. The system of claim 28, wherein the storage device is an ATA device.
36. The system of claim 28, wherein the storage device is a non-RAID configuration.